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NEWS 19 SEP 11 WPIDS, WPINDEX, and WPIX now include Japanese FTERM
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FILE COVERS 1907 - 21 Sep 2009 VOL 151 ISS 13

FILE LAST UPDATED: 20 Sep 2009 (20090920/ED)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

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=> s biphenyl and nitro and (absorption or absorbance) and substituent

82047 BIPHENYL

20182 BIPHENYLS

86210 BIPHENYL

(BIPHENYL OR BIPHENYLS)

176403 NITRO

93 NITROS

176466 NITRO

(NITRO OR NITROS)

1040310 ABSORPTION

14519 ABSORPTIONS
 1046692 ABSORPTION
 (ABSORPTION OR ABSORPTIONS)
 86704 ABSORBANCE
 5626 ABSORBANCES
 90529 ABSORBANCE
 (ABSORBANCE OR ABSORBANCES)
 123055 SUBSTITUENT
 111786 SUBSTITUENTS
 202744 SUBSTITUENT
 (SUBSTITUENT OR SUBSTITUENTS)

L1 49 BIPHENYL AND NITRO AND (ABSORPTION OR ABSORBANCE) AND SUBSTITUENT
 T

=> s l1 and py<=2003
 24036251 PY<=2003

L2 48 L1 AND PY<=2003

=> d l2 1-48 ti

L2 ANSWER 1 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Electrochemical, conductive, and magnetic properties of 2,7-carbazole-based conjugated polymers

L2 ANSWER 2 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Optical diagnostic agents for diagnosis of neurodegenerative diseases by means of near infra-red radiation (NIR radiation)

L2 ANSWER 3 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Photophysics of PBD derivatives. I. The fluorescence of para-biphenyl-substituted 2-(biphenyl-4'-yl)-5-phenyl-1,3,4-oxadiazoles

L2 ANSWER 4 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Solvent effects in the ultraviolet spectra of nitro- and aminobiphenyls

L2 ANSWER 5 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Effect of structure on reactivity of aromatic derivatives. IV. Effect of substituents on ionization constants and absorption spectra of some substituted derivatives of biphenylcarboxylic acids

L2 ANSWER 6 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Synthesis, spectra, and polarography of substituted 4-isothiocyanato biphenyls

L2 ANSWER 7 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI CH-bonding moments and infrared intensities of benzene derivatives. II. CH- and CD-valence vibrations of deuterated benzene monoderivatives

L2 ANSWER 8 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Electronic vibrational spectra and interaction of substituents via aromatic rings bound by a single bond

L2 ANSWER 9 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Electron spin resonance spectra of nitrobiphenyl radical anions

L2 ANSWER 10 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Conjugation in the o-terphenyl system

- L2 ANSWER 11 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Polarography, electron paramagnetic resonance spectra, and inductive effect of substituents in anion-radicals of p-nitrobiphenyls
- L2 ANSWER 12 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Infrared spectra of monosubstituted benzenes in the 667-222 cm.⁻¹ region
- L2 ANSWER 13 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Electron spin resonance spectra and the transmission of the effect of substituents in the anion radicals of p-nitrodiphenyls
- L2 ANSWER 14 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Effects of substituents and solvents on the ultraviolet absorption spectra of substituted cinnamaldehydes
- L2 ANSWER 15 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Determination of the location of the vinyl group in vinylidiphenyl oxide isomers from the absorption spectra
- L2 ANSWER 16 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Correlation of infrared intensity data with chemical reactivity indexes
- L2 ANSWER 17 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Interaction of electron acceptors with bases. III. Absorption spectra of substituted polynitrobenzenes in liquid ammonia
- L2 ANSWER 18 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Polar effects of substituents on the reaction rates of 4-R and 5-R-2-nitrochlorobenzenes with piperidine in benzene
- L2 ANSWER 19 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Intramolecular interaction between hydroxyl group and π -electrons. XIV. Electronic effect of the substituents on the interaction in 2-hydroxybiphenyls
- L2 ANSWER 20 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Steric interactions in the absorption spectra of 2,2'-di-arylbiphenyls and related compounds. III. Absorption spectra and structure of benzophenones
- L2 ANSWER 21 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Electron spin resonance (EPR) and polarographic investigation of substituted nitrobenzene negative ions
- L2 ANSWER 22 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Ultraviolet and infrared spectra of some aromatic nitro compounds
- L2 ANSWER 23 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Effect of substituents on the properties of molecules containing a system of conjugated π -bonds
- L2 ANSWER 24 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Induction studies in several groups of halogen-containing organic compounds by their C135, Br79, or Br81 pure quadrupole resonance spectra
- L2 ANSWER 25 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
 TI Optical investigation of mutual influence of groups in the molecules of

organic compounds

- L2 ANSWER 26 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Mutual effects of para substituents of benzene in the molecules
- L2 ANSWER 27 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Stable alkylation products of organonitrosohydroxylamines
- L2 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI The study of steric effects in substituted diphenyls by ultraviolet absorption spectroscopy
- L2 ANSWER 29 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Derivative effects in aromatic substitution. XXX. Electrophilic substituent constants
- L2 ANSWER 30 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Infrared absorption of heteroaromatic and benzenoid six-membered monocyclic nuclei. IV. Monosubstituted benzenes
- L2 ANSWER 31 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI New route to 3- and 2,6-substituted fluorenes
- L2 ANSWER 32 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Effect of the substituents on the properties of molecules of para derivatives of benzene
- L2 ANSWER 33 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Dibenzo[b,d]pyrans and related products
- L2 ANSWER 34 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Light absorption studies. X. Ultraviolet spectra in acid and basic media-some further observations on the ortho effect
- L2 ANSWER 35 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Influence of steric factors on the properties of dyes containing the biphenyl nucleus. VIII. Bisazo dyes from m- and p-aminobenzoyl derivatives of benzidine and 2,2'-dimethylbenzidine
- L2 ANSWER 36 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Arylation of aromatic compounds by the Meerwein reaction. Evidence for aryl radicals from orientation studies
- L2 ANSWER 37 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Some bromine, iodine, and indium nuclear quadrupole interaction frequencies
- L2 ANSWER 38 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Organic sulfated compounds. VI. Studies of the dibenzothiophene and dibenzothiophene sulfone series. Considerations concerning the sulfur bridge as a conductor and as an insulator of conjugation
- L2 ANSWER 39 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Influence of steric factors on properties of dyes containing biphenyl rings. I. Bis-azo dyes from benzidine and from its 2-mono- and 2,2'- and 3,3'-disubstituted derivatives
- L2 ANSWER 40 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Homolytic aromatic substitution. I. Action of aryl radicals on

nitrobenzene

L2 ANSWER 41 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Duration of the phosphorescence of benzene and its derivatives

L2 ANSWER 42 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI The benzidine rearrangement. II. The rearrangement of three 3,3',5,5'-tetrasubstituted hydrazobenzenes in 2:1 sulfuric acid

L2 ANSWER 43 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Decomposition reactions of aromatic diazo compounds. XII. The reaction between diazo compounds and potassium ferrocyanide

L2 ANSWER 44 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Catalytic debenzylization. The effect of substitution on the strength of the O-benzyl and N-benzyl linkages

L2 ANSWER 45 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Cis azo compounds. II

L2 ANSWER 46 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Resonance and some physical and chemical properties of biphenyl types

L2 ANSWER 47 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI The influence of substituents on the ultraviolet absorption of two conjugated benzene chromophores

L2 ANSWER 48 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN
TI Absorption spectra of biphenyl and some derivatives

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=> d 12 22,23,28,34,47,48 ibib abs

L2 ANSWER 22 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1961:85529 CAPLUS
DOCUMENT NUMBER: 55:85529
ORIGINAL REFERENCE NO.: 55:16136a-e
TITLE: Ultraviolet and infrared spectra of some aromatic nitro compounds
AUTHOR(S): Conduit, C. P.
CORPORATE SOURCE: Ministry Supply, Waltham Abbey, UK
SOURCE: Journal of the Chemical Society (1959)
3273-7
CODEN: JCSOA9; ISSN: 0368-1769
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB The ultraviolet and infrared spectra of all the isomeric di- and trinitro benzenes and toluenes were examined in order to obtain structural correlations. The absorption curves in the ultraviolet consisted mainly of a single intense maximum in the 210-80-m μ range, with one or more inflections on the long-wave-length side. Important factors in determining λ_{maximum} are as follows: (a) a pair or more of nitro groups tends to partially reduce their conjugation, and the magnitude of the reduction is determined by their positions in the ring. Thus, λ_{maximum} is 269 m μ for nitrobenzene, but <210.0 m μ for o-dinitrobenzene, 242, m μ for m-dinitrobenzene, and 265 m μ for p-dinitrobenzene; (b) a pair of vicinal nitro groups interferes sterically with one another so that neither can be coplanar with the ring. The conjugation of both substituents with the ring is almost 0, and the absorption approaches that of C₆H₆ itself (o-dinitrobenzene <210.0); (c) Me groups enhance the conjugation of nitro groups; this shifts λ_{maximum} p-nitrotoluene 283.5 m μ . In the ortho position some steric hindrance is met; thus, λ_{maximum} o-nitrotoluene is 265 m μ .

Infrared spectra show that the frequencies found for the asym. stretching mode of the nitro group fall into 3 ranges. For mononitro compds. this is 1509-40 cm.⁻¹, for dinitro compds. 1539-52 cm.⁻¹, and for trinitro compds. 1554-67 cm.⁻¹ Slight overlapping of the ranges occurs for the mono- and dinitro series but, in general, the ranges are sufficiently distinct to be used as an indication of the degree of nitration of unknown compds. Frequencies for the sym. vibration of the nitro group exhibit little regularity with respect to the number and position of the nitro substituents. Integrated intensities per NO₂ group as well as band widths for the sym. and asym. vibrations for all compds. studied are also tabulated.

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L2 ANSWER 23 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1961:70459 CAPLUS

DOCUMENT NUMBER: 55:70459

ORIGINAL REFERENCE NO.: 55:13343e-i,13344a

TITLE: Effect of substituents on the properties of molecules containing a system of conjugated π -bonds
AUTHOR(S): Shorygin, P. P.; Roshchupkin, V. P.; Petukhov, V. A.; Egorova, Z. S.

CORPORATE SOURCE: L. Ya. Karpov Phys.-Chem. Inst., Moscow

SOURCE: Zhurnal Fizicheskoi Khimii (1961), 35, 258-67
CODEN: ZFKHA9; ISSN: 0044-4537

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB A study was made of the effect of para substituents on the Raman and infrared spectra of PhNO₂. The substituent groups were: -H, -SO₂Me, -CONH₂, -F, -CO₂Et, -CHO, -CH₂Cl, -CCl₃, -OAc, -Cl, -CH₂, -NH₂C₆H₄Me-p, -Me, -CMe₃, -CH₂NMe₂, -Br, -CO, -NMeC₆H₄OMe-p, -I, -CH₂I, -OH, -CH:CH₂, -OMe, -OEt, -OPh, -Ph, -NHAc, -NMeCHO, -SH, -SMe, -CH:NC₆H₄Me-p, -ferrocenyl, -NH₂, -N:NPh, -CH:CHCCH:CH₂, -CH:CHPh, -NHNHPh, -NHNH₂, -CH:CPh₂, -NHMe, -NHPh, -NMe₂, -Net₂, -CH:CHCHO, -(CH:CH)₃ Ph, -CH:CHC₆H₄NH₂-p, -CH:CHC₆H₄NMe₂-p, -CH:NC₆H₄NMe₂-p, and -N:NC₆H₄NMe-p. The effect of the substituents was judged by (1) the difference, $\Delta\omega_s$, (cm.⁻¹), between the frequency magnitude of the sym. valence vibration of the NO₂ group in the derivs. XC₆H₄NO₂ (I) and the unsubstituted PhNO₂ (II) (Raman spectra of C₆H₆ solns.); (2) the difference between the frequency magnitude of the unsym. vibration of I and II (infrared spectra of C₆H₆ solns.); (3) the magnitude of the integral intensity coefficient (Raman spectra); (4) the intensity of absorption bands of I in heptane solns.; (5) the difference, $\Delta\lambda_l$, obtained in the case of C₆H₆ solns. of I and II; (6) the difference, $\Delta\mu$, between the observed magnitude of dipole moments of I and the vector sum of the moments in PhX and PhNO₂ (in Debye units); (7) the Hammett consts. The effect of electropos. substituent groups on the frequency of NO₂ groups was the opposite to the effect of the electroneg. substituent groups. The effect of both types of substituents on the optical properties (i.e., the intensity of the Raman lines, polarizability, position and the intensity of the absorption) was in the same direction, though in all cases the effect of the electropos. substituents was stronger than that of the electroneg. substituents. The effect of Ph-, and CH₂:CH- groups on the dipole moment was very small, but very pronounced in optical properties. The effect of I on the optical properties increased with an increase in the chain of the conjugated bonds. Parameters of the electron excitation levels were affected by the presence of heavy atoms attached to

II through a -CH₂-bridge.

L2 ANSWER 28 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1959:111115 CAPLUS

DOCUMENT NUMBER: 53:111115

ORIGINAL REFERENCE NO.: 53:19837f-g

TITLE: The study of steric effects in substituted diphenyls by ultraviolet absorption spectroscopy

AUTHOR(S): Beaven, G. H.

CORPORATE SOURCE: Med. Research Council Lab., Holly Hill, London

SOURCE: Steric Effects in Conjugated Systems, Proceedings of a Symposium (1958) 22-33

CODEN: 11XJAY

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB The effect of various substituents on the mol. conformation and electronic absorption spectra of Michler's hydrol blue (I), malachite green (II), and crystal violet (III) is discussed. The absorption maximum (mμ) in 98% AcOH and mol. extinction coeffs. are given for mono- to polymethyl derivs. of I, II, and III as well as halo, hydroxy, methoxy, acetoxy, benzyloxy, nitro, and methoxycarbonyl derivs. of II.

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L2 ANSWER 34 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1958:80917 CAPLUS

DOCUMENT NUMBER: 52:80917

ORIGINAL REFERENCE NO.: 52:14326c-e

TITLE: Light absorption studies. X. Ultraviolet spectra in acid and basic media-some further observations on the ortho effect

AUTHOR(S): Forbes, W. F.; Ralph, Audrey S.; Gosine, Rosemarie

CORPORATE SOURCE: Mem. Univ. Newfoundland, St. John's

SOURCE: Canadian Journal of Chemistry (1958), 36(No. 5), 869-78

CODEN: CJCHAG; ISSN: 0008-4042

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB cf. C.A. 52, 2534c. The spectra of acetophenones and related compds. were obtained in neutral solvent, 95% EtOH, concentrated H₂SO₄, 0.1N HCl, 0.1 and 1.0N NaOH, and at pH 3-11, and compared with previously reported spectra of substituted benzene derivs. Spectra were determined in duplicate on a Unicam S.P. 500 spectrophotometer with 1-cm. quartz cells. Evidence is adduced that the B-bands are determined primarily by steric and mesomeric (resonance) interactions. The main cause of the ortho effect in the B-band of electronic spectra is ascribed to steric interactions between vicinal substituents: steric interactions explain frequent similarity in the spectra of meta and ortho isomers. The effect of a 2nd substituent on the benzene ring is a short-range interaction, of minor importance, the order of magnitude being related to the order observed for frequency displacements in some vibrational spectra and to the order of acidity consts. for some aromatic acids.

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L2 ANSWER 47 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1937:37638 CAPLUS

DOCUMENT NUMBER: 31:37638

ORIGINAL REFERENCE NO.: 31:5273a-c

TITLE: The influence of substituents on the ultraviolet absorption of two conjugated benzene chromophores
AUTHOR(S): Pestemer, M.; Mayer-Pitsch, E.
SOURCE: Monatshefte fuer Chemie (1937), 70, 104-12
CODEN: MOCMB7; ISSN: 0026-9247

DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Curves and tables are given for the absorption spectra between 2500 and 4500 mm.-1 of biphenyl (I), its o-, m- and p-NH2 and NO2 and o- and p-CN derivs. in hexane or heptane and in MeOH, and its o-, m- and p-NH2.HCl derivs. in 0.1 mol. HCl. In general, substitution effects changes in the curves similar to those produced in the curves of the acetophenone and styrene analogs (C. A. 30, 8023.3) confirming the classification of the bands A and B with the same bands of pure benzene. The bands are fused into one for I and the p-derivs. The structure of band B does not depend on the C:C or C:O chromophore as such but depend on the effect of conjugation of the benzene chromophore. The amino group loses its substitution effect on salt formation with HCl.

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L2 ANSWER 48 OF 48 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1930:23040 CAPLUS
DOCUMENT NUMBER: 24:23040
ORIGINAL REFERENCE NO.: 24:2454c-f
TITLE: Absorption spectra of biphenyl and some derivatives

AUTHOR(S): Adam, Thomas. C. C.; Russell, Alfred
SOURCE: Journal of the Chemical Society (1930) 202-6
CODEN: JCSOA9; ISSN: 0368-1769
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Baly, Edwards and Stewart (J. Chemical Society 89, 514(1906)) have shown that the 7-banded absorption spectrum of C6H4 can be explained by (Collie's oscillation theory (J. Chemical Society 71, 1013(1897)) for the structure of the C6H6 mol. on the assumption that each band corresponds to a make-and-break of valency. The spectrum of C10H8 was discussed in a similar manner (Baly and Tuck, C. A. 3, 778) and found to be in agreement. In the present work the resemblance manifest between the spectra of Ph2 and of its derivs. has led to a corresponding theory for Ph2. Since 1 C atom of each nucleus is bound, no valency oscillation involving only 2 C atoms can take place, nor is an oscillation involving all 6 C atoms possible. The spectroscopic evidence points to the existence of a virtual p-bond in the Ph2 mol., making the 4-C atom the stable member of the ring. The spectra obtained for the 2 derivs. bear out the theory in the following respects: The 4-C atom being partially bound by a virtual bond, any electronic disturbance which includes the atom will be small compared with the typical disturbance and the resulting band will be absorbed in the typical band. If the main pulsation is suppressed by a 2-substituent, then selective absorption will be eliminated, except in so far as the 4-C atom is free to oscillate. In practice, 2-O2NC6H4Ph shows 1 shallow band and the heavily substituted (2-PhC6H4C6H4)2 shows a band still shallower. Data are given, in the form of curves, for Ph2, and the 4-NO2, 4-NH3 (and HCl salt), 4-F, 4-Cl, 4-Br, 2-NO2, 4-diphenyl and 2,2'-diphenyl derivs.

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